*PRESS BULLETIN 565* *November, 1941*

UNIVERSITY OF FLORIDA
AGRICULTURAL EXPERIMENT STATION
WILMON NEWELL, Director
GAINESVILLE

IMPERIAL MYCOLOGICAL INSTITUTE
12 JUL 1945

# MYCOSIS IN CHICKENS

M. W. EMMEL
Veterinarian, Florida Agricultural Experiment Station

Five years ago the term mycosis was seldom used in this State in the diagnosis of poultry diseases. However, during recent years mycosis has been so freely diagnosed that many poultrymen are in a state of bewilderment about this "new disease" which appears to be so prevalent in Florida. Although not having been used in connection with diseases of poultry until recent years, the term is not a new one. Mycosis refers to an infection by fungi. There are a number of different species of fungi capable of infecting chickens. Each of these infections will be discussed briefly.

**Brooder Pneumonia.**—This disease is caused by a specific fungus, *Aspergillosis fumigatus*. The disease is most common in young chickens and often is contracted in the brooder. It is not unlikely that what were regarded as outbreaks of brooder pneumonia in previous years were actually outbreaks of pullorum disease which, under some circumstances, has similar symptoms. Since official testing for pullorum disease has gained widespread approval and the prevalence of pullorum disease has been greatly reduced the incidence of brooder pneumonia has decreased. *Aspergillosis fumigatus* infection does not occur frequently in Florida.

The fungus primarily infects the lungs and air sacs which are located immediately posterior to the lungs. In severe cases the fungus may invade any of the visceral organs as well as the eyes. Infection is usually fatal. Medication is of little avail, since the infection is located in areas in which remedies cannot be brought in contact with the fungus. Sanitation usually is effective in preventing and controlling the disease.

**Favus.**—This disease is caused by a specific fungus, *Lophophyton gallinae*. The infection usually is confined to the comb and wattles and appears as whitish or grayish patches. Occasionally the infection extends to the feathered portions of the body, in which instance whitish crusts appear at the base of feathers. The infection often is chronic and occasionally disappears without treatment. Deaths resulting from infection seldom occur. A 1.0 percent solution of iodine in glycerol or in mineral oil applied to infected areas usually is effective in treating infections of the comb and wattles.

**Sod Disease.**—This disease is an infection of the feet in which extensive, hard encrustations develop on the top surface of the toes causing them to curl upwards. As the infection progresses the toes, joint by joint, often slough from the foot. Investigations at this station have indicated that sod disease is caused by a specific fungus which as yet has not been identified.

The disease occurs frequently among young chickens which are allowed to run on dew-covered grass. The moisture softens the tissues of the feet and creates conditions favorable to fungous infection. In such instances birds should not be allowed access to dew-covered grass. In some instances the disease has been observed in chicks with access to bare soil only. This

is an indication that the soil harbors the fungus, and the birds should be moved to fresh soil or placed on a floor where sanitary conditions are maintained. The removal of scabs by the application of warm soapy water and the application of tincture of iodine often are helpful in treating individual cases.

Sod disease frequently occurs among young turkeys as well as chickens.

**"Wet Wings".**—This is a disease which was observed first in Florida several years ago. The under surface of the wings and the portion of the skin of the body in apposition thereto become covered with a moist, light brown, extremely fetid encrustation. One instance has been observed in which extensive lesions caused the wings to slough from the body. Affected birds carry their wings apart from the body and a characteristic odor usually is detectable in the house in case many birds are infected.

Several species of fungi have been isolated from lesions occurring in different outbreaks of the disease, indicating that it is a non-specific infection. Secondary infection of the lesion by bacteria is probably responsible to a large extent for the fetid odor.

Experiments have indicated that the infection can be transmitted experimentally to birds only when the skin of the under side of the wings has been kept moist for a period of time. The infection has been found to occur among birds in inadequately ventilated battery plants and in birds subjected to crowded conditions. Naturally and experimentally infected birds recover readily when moved to adequately ventilated, uncrowded quarters. The application of tincture of iodine is beneficial, but recovery is very slow unless inadeqate ventilation and crowded conditions are corrected.

**"Cholera-like Disease".**—This disease has been so named by poultrymen because the symptoms observed are similar to those of fowl cholera. It has been found to occur in Florida only during the rainy season. The disease is acute, the period of illness being from six to 12 hours. Mortality is high. The comb and wattles become dark in color. Lesions are difficult to demonstrate.

The disease has not been found definitely to be caused by a fungus. The infection apparently is of intestinal origin, as a milk flush for several days (25 percent of dried whey or 40 percent of dried buttermilk or skimmilk in the regular mash) gives prompt and effective results in controlling the disease.

**Miscellaneous Fungous Infections.**—Various fungous infections have been found affecting the skin of birds housed under inadequately ventilated battery conditions. These infections usually attack the bare or poorly feathered portions of the body. Irregular areas of skin become roughened, dry, and scaly. Adequate ventilation gives prompt and effective relief.

Other types of fungous infections have been found associated with damp, moldy litter and occasionally with moldy feed.

**Intestinal Mycosis.**—Diagnosis of intestinal mycosis in chickens during the past several years in this state have been made so frequently by representatives of remedy concerns, feed salesmen, and others as to make poultrymen thoroughly mycosis conscious. In fact, diagnoses of intestinal mycosis have been made so frequently that were such diagnoses correct this type of mycosis would be responsible for at least 80 percent of the diseases among chickens occurring in this state. Various lesions of the intestinal tract including erosion of the gizzard have been attributed to this disease.

Observations of poultry flocks and on birds sent to the Florida Agricultural Experiment Station for diagnosis indicate that intestinal mycosis is not of common occurrence and represents an insignificant percentage of the mortality occurring among chickens in this state. That such a disease as intestinal mycosis exists cannot be doubted but its occurrence is so uncommon that the frequent diagnoses of this condition in this state are unwarranted.

Some of the commercial remedies intended for the treatment of intestinal mycosis produce beneficial results principally through their tonic effect upon the birds.